

**【CLAIMS】**

**【Claim 1】** A lithium ion secondary battery, comprising:

a can having a space defined therein while being opened at an upper portion thereof, and a flange extended outwardly from an upper end of the can;

5 a cap having a contact surface facing the flange of the can; and

an electrode assembly inserted into the can and including a cathode plate and an anode plate,

wherein the flange of the cap is welded at an outer surface of the flange to an outer surface of the cap by means of micro-arc welding, thereby forming a sealed 10 container.

**【Claim 2】** The battery as set forth in claim 1, further comprising a terminal connected to one of the cathode plate and the anode plate, while being protruded to the outside through the cap or through one side wall of the can.

**【Claim 3】** A lithium ion secondary battery, comprising:

15 a cap having a space defined therein while being opened at a lower portion thereof, and a flange extended outwardly from a lower end of the cap;

a can having a space defined therein while being opened at an upper portion of the can, and a flange extended outwardly from an upper end of the can while facing the flange of the cap, the flange of the can having a predetermined region having a width larger than that of the flange of the cap such that an inner end of the 20 predetermined region is located inside an inner end of the flange of the cap;

an electrode assembly inserted into the can and including a cathode plate and an anode plate; and

25 a protruded terminal connected to one of the cathode plate and the anode plate, while being protruded to the outside through the predetermined area of the can having a width larger than that of the flange of the cap,

wherein the flange of the cap is welded at an outer surface of the flange to an

outer surface of the flange of the cap by means of micro-arc welding, thereby forming a sealed container.

**【Claim 4】 A lithium ion secondary battery, comprising:**

a can having a space defined therein while being opened at an upper portion thereof, and a flange extended outwardly from an upper end of the can, the can having a step formed on one side wall thereof, in such a manner that the can has a first lower surface, a fist side wall extended upwardly from the first lower surface, a second lower surface located higher than the first lower surface while being extended outwardly from the fist side wall, and a second side wall extended upwardly from the second lower end;

a cap having a contact surface facing the flange of the can;

an electrode assembly located on the first lower surface and including a cathode plate and an anode plate; and

a protruded terminal connected to one of the cathode plate and the anode plate, while being protruded to the outside through the second lower surface of the can,

wherein the flange of the can is welded at an outer surface of the flange to an outer surface of the can by means of micro-arc welding, thereby forming a sealed container.

**20 【Claim 5】 The battery as set forth in claim 1 or 4, wherein the cap has a flat shape.**

**【Claim 6】 The battery as set forth in claim 1 or 4, wherein the cap has a flange facing the flange of the can, and a space formed therein while being opened at a lower portion of the space.**

**25 【Claim 7】 The battery as set forth in claim 1, 3 or 4, wherein the flange has a width of 0.3 mm or more and 5 % or less of a long side length of the battery.**

**【Claim 8】** The battery as set forth in claim 1, 3 or 4, wherein the micro-arc welding is micro-plasma welding.